

REMARKS

Claims 1-28 are pending in the present application and all of the claims were rejected in the final Office Action mailed on April 15, 2010. Claim 1 has been amended to add the limitations of claim 5 and some of the limitations of claim 7 in order to more clearly define what the Applicants believe to be their invention. Claim 5 has been cancelled and claims 7 and 8 have been amended. The Applicants respond to the issues raised in the final Office Action mailed on April 15, 2010 as follows:

Claim Rejections -- 35 USC § 102

Claims 1-10 and 12-28 have been rejected under 35 U.S.C. 102(b) as anticipated by U.S. Patent No. 6,030,691 to Burchard et al. (“Burchard”). Burchard discloses an antifalsification paper having a security element in the form of a thread or band. (Abstract.) In rejecting claim 1, the Office Action states at page 3, line 14 to page 4, line 2 that:

In addition, Burchard teaches that strip includes *optically active elements* associated with the metallic and transparent regions *that produce an optical effect on a less than macro-contrast scale* (i.e., micro-contrast) that makes it possible to identify the document (see Column 3, Lines 23-60). Specifically, Burchard provides that the strip includes large, easy-to-read writing (with “large” defined as being 1 mm high) and *small writing visually difficult to resolve* (with “small” being defined as being smaller values) (*Id.*).

(Emphasis added.)

The relevant portion of claim 1 that the Office Action finds to be anticipated by the “*small writing visually difficult to resolve*” disclosed by Burchard is reproduced below:

wherein *the strip also comprises optically active elements* in association with the metallised regions and/or the transparent regions of the strip to produce an optical effect on the document to be safeguarded *on a less than macro-contrast scale*.

(Emphasis added.)

The “*optically active elements*” are defined in claim 1 as being “in association with the *metallised regions* and/or the transparent regions of the strip” and as “produc[ing] an optical effect on the document to be safeguarded *on a less than macro-contrast scale*.” The amendments to claim 1 require that these “optically active elements comprise *optically active structures* . . . [which] comprise one or more of the following safeguard elements: zone comprising diffraction lines, purely reflective metallised zone, zone comprising a diffraction mat, zone comprising a hologram, and metallised zone of a transparent region.” One skilled in the art would understand that amended claim 1 requires the “optically active elements” and the “metallised regions” to be separate structures and for the “optically active elements. . . [that] produce an optical effect on the document to be safeguarded on a less than macro-contrast scale.” Moreover, the optically active elements comprise *optically active structures*, which comprise one or more 2D or 3D safeguarding elements, i.e., a zone comprising diffraction lines, a purely reflective metallised zone, a zone comprising a diffraction mat, a zone comprising a hologram or a metallised zone of a transparent region.

The Examiner has cited col. 3, lines 23-60 of Burchard as teaching “optically active elements associated with the metallic and transparent regions that produce an optical effect on a less than macro-contrast scale.” However, there is no teaching or suggestion in col. 3, lines 23-60 of Burchard that the small writing is formed by “optically active elements” with optically active 2D

and 3D structures. Instead of optically active 2D and 3D structures, Burchard teaches “*small negative writing*” at col. 3, lines 37-41:

The same protective effect is utilized in a further preferred embodiment wherein adjacent areas on a transparent plastic thread are provided with large, easy-to-read negative writing and with *small negative writing* visually difficult to resolve.

(Emphasis added.)

The small negative writing taught by Burchard is not formed by optically active 2D and 3D structures or any other type of structure, but by openings or “gaps” in the metallic coating—these gaps are formed by removing portions of the metallic coating. At col. 2, lines 43-47, Burchard discloses that:

In a first embodiment the inventive antifalsification paper has a safeguarding thread made of transparent plastic that bears so-called negative writing, i.e. an opaque, in particular metallic, coating with *gaps in the form of characters or patterns*, in spaced apart areas.

(Emphasis added.)

The “*small negative writing*” disclosed in Burchard is formed by “*gaps*” in a metallic coating that is applied to a transparent plastic layer. These “*gaps*” are created by removing portions of the metallic coating from the surface of the transparent plastic layer. Burchard teaches how the “*small negative writing*” can be formed at col. 3, lines 2-10:

The negative writing is produced for example by a *washing process* as known from EP-A 0 330 733. The printed image is first printed on a film as it is to appear as a negative image in the opaque coating later, and the opaque coating, e.g. a metal coating, is only applied in a second method step. For applying the printed image one use inks or lacquers that have low adhesion to the film and/or to the coating *so that the coating can be removed either alone or together with the ink*.

(Emphasis added.)

Thus, the “*small negative writing*” in the security element disclosed by Burchard is formed by the areas where the metallic coating has been removed and the uncoated transparent plastic layer is exposed. There is no teaching or suggestion by Burchard that the *small negative writing* is formed by or includes any “*optically active elements*” comprising optically active 2D or 3D structures as required by amended claim 1.

In contrast to the “*small negative writing*” disclosed by Burchard, amended claim 1 requires a strip that comprises *optically active elements* with optically active structures. The specification discloses that these optically active elements can be formed from any of the following optically active structures:

[0032] said optically active elements comprise optically active structures formed from a metallisation,

[0045] said optically active elements comprise a diffraction mat integrated into a diffractive metallised region,

[0046] said optically active elements comprise purely reflective metallised regions,

Thus, the optically active structures of the present invention are formed from “*positive*” *structures*—not *negative structures* that are formed by removing portions of a metallic coating from a transparent plastic layer to form “*gaps*” in the metallic coating. These “*gaps*” do not have any optically active structures or any other “*positive*” structure.

The optically active elements in amended claim 1 are positive structures, while the “*small negative writing*” disclosed by Burchard are *negative* structures—just like the name implies. A “*negative*” structure (i.e., gaps in a metallic coating) cannot anticipate a “*positive*” structure (i.e.,

optically active elements). Accordingly, one of ordinary skill in the art would not find the optically active elements with the optically active structures in amended claim 1 to be anticipated by the “gaps” in the metallic coating that Burchard uses to form the “*small negative writing*.”

Claims 1-10 and 12-28 cannot be anticipated by Burchard because Burchard does not disclose one of the elements in the claims, i.e., Burchard does not disclose the optically active structures that produce an optical effect on the document to be safeguarded *on a less than macro-contrast scale*. Accordingly, the Applicants respectfully request that the rejection of claims 1-10 and 12-28 as anticipated by Burchard be withdrawn.

Claim Rejections – 35 USC § 103

Claim 11 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Burchard as applied to claim 10 and further in view of U.S. Patent Application Pub. No. US 2003/0058491 to Holmes (“Holmes”), which teaches an optically variable security device. Holmes has been cited in paragraph 11 of the Office Action as teaching a diffraction based optically variable device that can include a structure that exhibits a first optically variable effect and a second structure that exhibits a second optically variable effect. The Applicants respectfully disagree with this finding. Holmes neither teaches nor suggests both a metallised region and optically active structures that produce an optical effect on the document to be safeguarded *on a less than macro-contrast scale* as required by the claims. Therefore, Holmes does not overcome the deficiencies in Burchard that are discussed above and claim 11 is not obvious in view of the combination of Burchard and Holmes. Accordingly, the Applicants respectfully request that the rejection of claim 11 be withdrawn.

Conclusion

The Applicants submit that the arguments made herein have distinguished the cited prior art from the amended claims and respectfully request that the rejections be withdrawn and the claims be allowed. If there are any further concerns regarding the above-identified application, it is respectfully requested that the Examiner contact the Applicants' attorney at the telephone number provided below.

Respectfully submitted,

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